AMENDMENTS TO THE CLAIMS

Please add or amend the claims to read as follows, and cancel without prejudice or disclaimer to resubmission in a divisional or continuation application claims indicated as cancelled:

1-63. (Cancelled)

64. (Currently Amended) A process for producing a long-term culture of immature human or mouse dendritic cells, comprising:

(i) culturing an embryonic stem cell in the presence of composition comprising a cytokine, which bring about differentiation of said embryonic stem cell into an immature dendritic cell; and

(ii) recovering said immature dendritic cell from said culture, wherein said immature dendritic cell is capable of maturing into an immunostimulatory phenotype cell.

65-67. (Cancelled)

68. (Previously Presented) The process according to claim 64, wherein said composition further comprises IL-3.

69. (Previously Presented) The process according to claim 68, wherein said composition further comprises GM-CSF.

70. (Currently Amended) The process according to claim 64, wherein said embryonic stem cell in (i) is in the form of embryoid bodies~~, generated by culturing purified embryonic stem cells in suspension for 14 days in the absence of recombinant leukemia inhibitory factor~~.

71. (Previously Presented) The process according to claim 64, wherein said embryonic stem cell (ES) is genetically modified.

72. (Previously Presented) The process of claim 71, wherein the cell expresses one or more heterologous gene(s).

73. (Previously Presented) The process of claim 72, wherein the heterologous gene (s) encode a protein which has an immunomodulatory effect.

74. (Previously Presented) The process of claim 73, wherein the protein is a cell surface receptor.

75. (Previously Presented) The process of claim 74, wherein the protein is Fas-ligand.

76. (Previously Presented) The process of claim 72, wherein the gene(s) express a dominant negative form of an endogenous protein.

77. (Previously Presented) The process of claim 73, wherein the protein is an antigen target for the immune system, such as an autoantigen, a tumour antigen, or a foreign antigen.

78. (Previously Presented) The process of claim 64, wherein the cell co-expresses two or more heterologous genes.

79. (Previously Presented) The process of claim 78, wherein one of the heterologous genes prolongs the life-span of the cell.

80. (Previously Presented) The process of claim 79, wherein the gene is an anti-apoptotic gene.

81. (Previously Presented) The process of claim 78 or 79, wherein the gene encodes FLIP or bcl-2.

82. (Previously Presented) The process of claim 64, wherein one or more endogenous gene(s) have been inactivated.

83. (Previously Presented) The process of claim 82, wherein the inactivated endogenous gene(s) are B7-1, IL-12, p35 subunit of IL-12 or p40 subunit of IL-12.

84. (Previously Presented) The process of claim 71, wherein said embryonic stem cell is transfected with a gene, which is expressed in the dendritic cell.

85. (Previously Presented) The process of claim 84, wherein the gene is under the control of a promoter which initiates gene expression on maturation of the dendritic cell.

86. (Previously Presented) The process of any one of claims 84, 85 or 111, wherein the gene is a reporter gene which expresses a detectable product in the dendritic cell.

87. (Previously Presented) The process of claim 86, wherein the gene encodes a fluorescent product.

88. (Previously Presented) The process of claim 87, wherein the gene is the GFP gene.

89. (Previously Presented) The process of claim 71, wherein the ES cell is genetically modified so as to inactivate a copy of a gene.

90. (Previously Presented) The process of claim 64, wherein the recovered immature dendritic cell is substantially pure.

91. (Previously Presented) The process of claim 64, wherein the cell is a lymphoid dendritic cell.

92. (Previously Presented) The process of claim 64, wherein the cell is a myeloid dendritic cell.

93. (Previously Presented) The process of claim 64, wherein the cell is a human dendritic cell.

94. (Previously Presented) The process of claim 64, wherein the ES cell is derived from a mouse strain such as CBA/Ca or C57BI/6.

95. (Currently Amended) The process of claim 64, wherein the ES cell is from [an] the ESF116 cell line.

96-104. (Cancelled)

105. (Previously Presented) The process of claim 79, wherein the gene encodes FLIP or bcl-2.

106. (Previously Presented) The process of claim 85, wherein the gene is a reporter gene which expresses detectable product in the dendritic cells.

107. (Previously Presented) The process of claim 106, wherein the gene encodes a fluorescent product.

108. (Previously Presented) The process of claim 107, wherein the gene is the GFP gene.

109. (Cancelled)

110. (Currently Amended) The ~~method~~ process according [of] to claim 64, wherein said composition further comprises GM-CSF.

111. (Previously Presented) The process of claim 84, wherein the gene is under the control of a promoter which upregulates gene expression on maturation of the dendritic cell.

Status of Claims

Claims 64, 68-95, 105-108, 110, and 111 are pending in the application. Claim 110 has been objected to. Claims 64, 68-95, 105-108, 110, and 111 have been finally rejected. Claims 64, 68-95, 105-108, 110 and 111 have been amended.

Claim 70 has been voluntarily amended for clarification only. This amendment does not narrow the scope of the claim, nor is it being made for reasons of patentability.

Substitute Specification

In response to the Examiner's requirement to file a substitute specification excluding claims pursuant to 37 CFR 1.125(a), Applicants hereby submit a substitute specification. Applicants state that the substitute specification includes no new subject matter from the original specification and any previously entered amendment under 37 CFR 1.1121.

Claim Objections

In the Office Action, the Examiner objected to claim 110 because of a missing period. In response Applicants have added a period at the end of claim 110. Accordingly, Applicants request withdrawal of the objection.